Module 1 (Part 2)

Mastering the Green Digital Entrepreneurial Mindset

www.**startdsp**.eu

Module 1 Overview

This module is designed to ignite entrepreneurial thinking by guiding learners through the development of their first green digital business idea. Learners will cultivate key skills and critical capacities such as systems thinking, circular innovation, and digital fluency, while aligning personal purpose with entrepreneurial action. By the end of this module, learners will have drafted an initial green digital business idea and be prepared to enhance and innovate it further in Modules 2 – 6.

01

Introduction to *EntreComp, DigComp and GreenComp Entrepreneurial Frameworks*

Introduction to GreenComp, DigiComp, and EntreComp Frameworks, and how they guide modern entrepreneurship.

02

The Power of Entrepreneurial Skills in a Green and Digital World

Understand the value entrepreneurial skills play in building resilient, sustainable, and digitally enabled businesses, and how EU frameworks support this.

03

Entrepreneurial Mindset – Think Like a Change-Maker

Cultivate an entrepreneurial mindset within the context of sustainability and digital transformation.

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Section **02**

The Power of Entrepreneurial Skills in a Green and Digital World

The Power of Digital Tools

Digital tools have enormous power: they allow us to communicate instantly, analyse data, automate processes, and scale up solutions rapidly.

Meanwhile, **sustainability** has become essential in business because our society is increasingly aware that our economic activities must not destroy the environment or exhaust resources needed for the future.

In fact, people today widely believe that businesses **should** prioritise sustainability – they *want* companies to be greener – but they also recognise it can be challenging to balance making a profit with doing good for the planet mdpi.com.
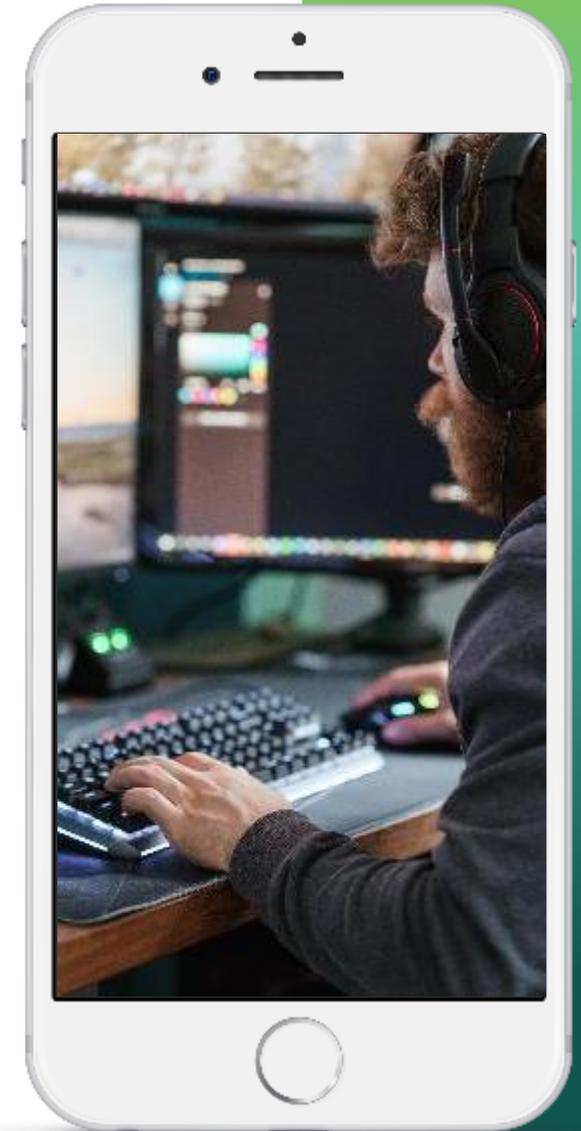
Digital Competences (Tech Skills 101)

This is where having the right competences (skills, knowledge, and attitudes) becomes crucial. By developing sustainable digital competencies, you find creative ways to use technology *responsibly* and **innovatively**, so that your future startup can succeed while contributing to a better world.

→ Let's start with digital competence. Simply put, digital competence is your ability to confidently and critically use digital technology in various areas of life – learning, work, and participating in society. It's more than just knowing how to use a computer or smartphone; *it's a blend of knowledge, skills, and attitudes that help you navigate the digital world safely and effectively.*

→ *According to a key European framework, digital competence involves the confident, critical and responsible use of digital technologies for learning, work, and participation in society.*
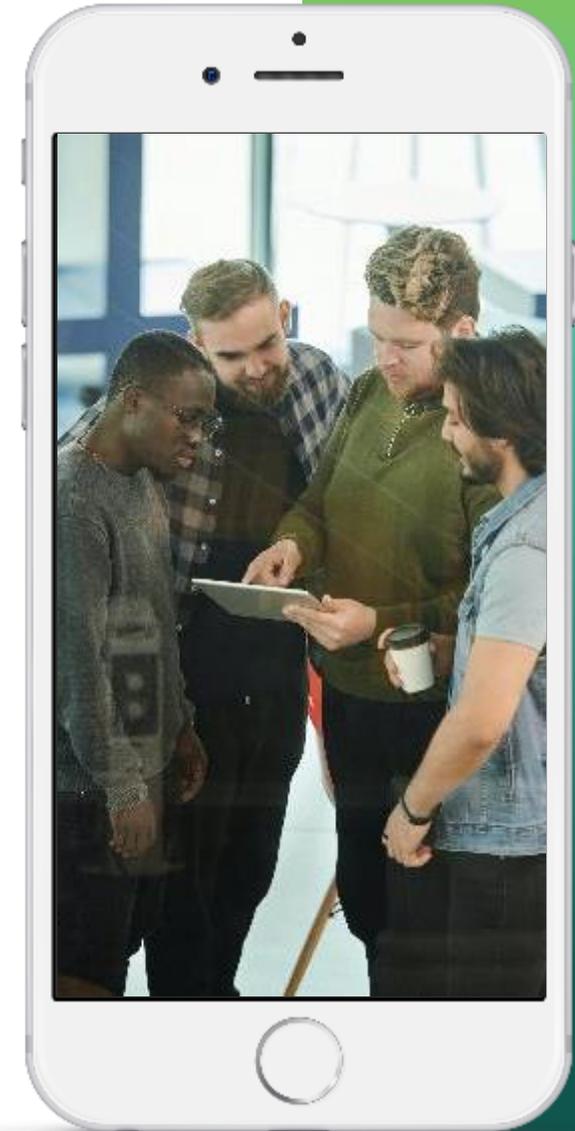
Becoming Digitally Competent

For an aspiring entrepreneur, being digitally competent **means you can quickly learn new tools** (say, a new social media platform or a data analytics tool), evaluate which technologies make sense for your business, and use them to achieve your goals.

It also means you're **aware of the** *risks*: for example, you know how to safeguard your startup's online presence and data.

All these skills **make you more adaptable and innovative** – qualities every entrepreneur needs in a tech-driven economy. In short, digital competence is about becoming **tech-savvy** in a smart and responsible way.

5 Core Elements of Digital Competence Include:

1. Information & Data Literacy

Knowing **how to search** for information online, **judge if sources are trustworthy**, and **manage data.**

2. Communication & Collaboration

Using digital tools (like email, social media, or collaboration platforms) to **connect with others, share ideas, and work together**.

3. Digital Content Creation

Being able to **create and edit** new content in different formats (text, images, video, code). This could mean **designing** a website, **writing** a blog post, or even **coding** a simple app.

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5 Core Elements of Digital Competence Include:

4. Safety & Security

Understanding how to **stay safe online**, **protect your privacy**, and **practice good cyber hygiene** (for example, using strong passwords and being aware of cyber threats). Digital safety also covers **digital well-being** – managing screen time and avoiding internet burnout.

5. Problem Solving with Tech

Using digital tools to **solve problems** or **streamline tasks**. This might involve a bit of **critical thinking** and even basic programming or using software in clever ways to **overcome challenges.**

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> " *The careful use of our resources is a topic that concerns everyone. Last but not least, climate change shows how crucial it is to treat this topic from the very beginning. Water is a primary resource as well as the habitat of many animal and plant species. The digital transformation often seems contrary to environmental protection. But with sustainable digital competence, digital tools can help protect our resources. GetYourWings conveys digital competence in education, training and consulting with its own, unique methods.*

Dr. Anabel Ternès, CEO and founder of GetYourWings gGmbH, which is committed to sustainable digital competence, speaks about '***How Digitalisation can Support Resource Saving Behaviours'.***

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The Power of Sustainability for Entrepreneurs

Now let's talk about **sustainability competences** – the knowledge, skills, and mindset that help you act in ways that are good for the environment and society.

You've probably heard the term **"sustainable development."** It refers to meeting the needs of the present without compromising the ability of future generations to meet their own needs.

In practice, sustainability in a business context means **finding a balance** between economic success, environmental protection, and social well-being – often called the **"triple bottom line"** (people, planet, profit).

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Sustainability Competences are Powerful

For entrepreneurs, having sustainability competencies is powerful. It means you understand issues like climate change, resource depletion, and social equity, and you **integrate** that understanding into your business plans.

Why are sustainability competences important and influential?

For one, our generation is **facing urgent environmental challenges** – from climate crises to loss of biodiversity – that can't be ignored.

Businesses are expected to be part of the solution!

Around the world, companies and consumers are increasingly seeking products and services that have a positive impact on the community and the environment. In other words, **green businesses are on the rise** because there is both a **need and a market demand** for sustainable solutions.

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However, Building a Sustainable Enterprise Isn't Automatic...

It requires specific skills and knowledge. These skills might include:

Understanding **environmental regulations** and standards

Knowing how to measure your company's **carbon footprint** and practising **energy efficiency** and **waste reduction**

Ensuring **fair and ethical treatment of any workers** or communities involved in your venture.

Entrepreneurs have noted that while they strongly support sustainability, they often need practical skills and support to make it happen!

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Equally important are certain **attitudes and soft skills.**

For example, having a long-term vision (thinking about future generations), being willing to innovate for social good, and possessing a sense of responsibility for your impact on others.

The message is clear: to be a successful entrepreneur in the 21st century, it helps tremendously to care about our planet and to have the skills to put that care into action.

The European Commission even introduced the *GreenComp Entrepreneurial Framework* to support this key objective *(See Section 1).* It outlines skills like *"embodying sustainability values," "critical thinking,"* and *"taking action for sustainability"*

Recommended Reading
- **MDPI:** The Future of Sustainable Entrepreneurship: Youth Perspectives in Greece and Poland
- GreenComp: the European sustainability competence framework

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Sustainable digital entrepreneurship means *designing businesses where every click also helps the planet.

Digital tools don't just make business easier — they make it **smarter, cleaner, and more impactful**.

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Merging the Two: Sustainable Digital Entrepreneurship

Now that we've defined digital competence and sustainability competence, let's explore how they come together.

Sustainable digital entrepreneurship means using your digital skills together with your sustainability mindset to create or run a business that is both innovative and eco-friendly. This is the sweet spot where technology and environmental responsibility meet, and it's where you, as a young entrepreneur, can truly shine.

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Digital Technology is Your Powerful Ally

Digital technology can actually be a powerful ally in sustainability efforts.

As one sustainability expert noted, the digital transformation – think of things like **big data, mobile apps, Internet of Thing**s – often seems at odds with environmental protection, but with sustainable digital competence, digital tools can help protect our resources.

In other words*, if you know how to use technology smartly, you can reduce waste, save energy, and make processes more efficient in ways that help the environment.*

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Practical Application:
Scenario Building Examples

1

Food Waste App → *Build an app to help people and communities share or donate surplus food, cutting down on waste.*

You could **research and develop an app** similar to existing apps that tackle food waste, but tailored to your community's needs. Here, your coding and app design skills (digital competence) directly support a sustainability goal (less waste).

2

Data for Impact → *Use analytics to optimise delivery routes, saving fuel and reducing emissions.*
This is where you use **data analytics to optimise supply chains**. In this case, your ability to work with data and digital tools helps make the business greener.

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Practical Application:
Scenario Building Examples

3

Green E-Commerce → *Run an online store hosted on renewable-powered servers, with eco-packaging and carbon-neutral shipping.*

Your startup is online (like an e-commerce store), you decide to use green web hosting (servers powered by renewable energy) and design your website to be energy-efficient. This requires both tech know-how and an ethos of sustainability.

4

Smart Marketing → *Leverage social media skills to educate, inspire, raise awareness and encourage sustainable behaviour.*

Use different online platforms and social media to raise awareness and encourage sustainable behaviours, e.g., upload inspiring storytelling videos with a compelling campaign and message.

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CASE STUDY: Tech-Driven Model
FoodCloud: Turning Surplus into Support

Feeding Millions through Digital Sharing

Click to Watch Video

FoodCloud is one of Ireland's largest social enterprises, redistributing surplus food from retailers and food businesses to charities who need it. It uses a **digital platform to connect surplus food** from retailers and producers with charities. It helps **redistribute edible food** that would otherwise go to waste.

Thanks to its **tech-driven model,** FoodCloud has redistributed **360 million meals** across five countries. They also recently launched **FoodCloud Kitchen**, producing meals for charities without kitchen capabilities, and aim to redistribute **a billion meals by 2030**

https://www.youtube.com/watch?v=qUQTSJIs8qQ

Source: Rethink Ireland.   Entrepreneurship Education

CASE STUDY: Food Cloud *Tech-Driven Model*

FoodCloud shows how digital innovation and sustainability work hand in hand.

Their ***digital platform***, called Foodiverse, includes an app for local stores to quickly list surplus items and a central data infrastructure for larger food industry partners to manage donations. This technology enables FoodCloud to efficiently track and measure food redistribution, ensuring that food that would go to waste instead feeds people in need.

Digital Competence: Their platform uses digital competence (app and logistics technology) to connect supermarkets and producers with charities,

Sustainability Knowledge: Alongside sustainability knowledge (tackling food waste)

Entrepreneurial Action: Backed Up with entrepreneurial action (scaling across countries).

The result: over 360 million meals redistributed that would otherwise have gone to waste. Like FoodCloud, you can harness digital tools to solve big problems—whether in food, energy, fashion, or beyond—by building your own sustainable digital competencies.

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CASE STUDY: Food Cloud *Tech-Driven Model*

Collaboration with Deliveroo so that communities can contribute to the cause. Deliveroo Ireland formed a strategic partnership with FoodCloud, an non-profit focused on food waste and food insecurity, through its "Full Life" campaign.

This collaboration includes enabling customers to make round-up donations to FoodCloud through the Deliveroo app and funding FoodCloud's Growers Project, which addresses farm-level food waste and delivers produce to communities.

deliveroo

FoodCloud

Deliveroo launches in-app charity donation function as survey reveals **1 in 3 Irish people (33%)** look for simpler ways to donate to charity.

Through the partnership, Deliveroo is aiming to save **210 million tonnes** of food from going to waste, a commitment that started with a goal of **500,000 meals.** This will prevent **675 tonnes of CO2 emissions** from entering the atmosphere and damaging the environment in the process.

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'You must understand the problem you are trying to solve from the user perspective. In the early days, we spent a lot of time in-store talking to staff who would be donating and a lot of time speaking to charities who would be collecting the food to get an understanding of their needs'.

Food Cloud Ireland with Rethink Ireland

We've helped ensure the equivalent of

80 Million Meals

have gone to people and not to waste

FoodCloud supports over **9,500+** community groups in Ireland and the UK

That's over **33,599** tonnes of food redistributed. With an estimated value of **€100.8** million!

Approximately **107,518** tonnes of CO₂eq avoided

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Image taken from Foodcloud´s website

Unlocked Case Study: Foodcloud, combating food poverty and food waste together

CASE STUDY: Smart Marketing
Fatemah Alzelzela, EcoStar
Trading Waste for Plants

Fatemah Alzelzela (Kuwait) started Eco Star, a non-profit recycling initiative that exchanges trees and plants for waste from homes, schools and businesses in Kuwait. Since launching in early 2019, Eco Star has recycled over 130 tonnes of metal, paper and plastic.

Smart Marketing: She built her recycling non-profit's consumer base by **educating people on social media,** eventually gaining over **20,000 followers** and **inspiring action** on waste management. Her digital communication savvy helped scale up an environmental initiative.

https://www.youtube.com/watch?v=YGXpIptOGtA

Source: Five Young Entrepreneurs Embracing Sustainable Business Models

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CASE STUDY: EcoStar - *Smart Marketing*

This Case Study example shows the power of blending skills. *"You can't manage what you can't measure,"* says Alzelzela, noting teams have data points from 2,000 homes, schools, companies and restaurants.

"We can now start analysing the data we have generated, to find out which areas generate more waste, and why."

Digital Literacy: To launch EcoStar, Fatemah combined digital competence (programming and data literacy)

Sustainability Knowledge: She combined sustainability knowledge (understanding waste management challenges)

Entrepreneurial Drive: Backed Up with her entrepreneurial drive (turning ideas into action)

Fatemah's journey proves how young innovators can *use technology to tackle real environmental issues.* Around the world, others are doing the same—from transforming recycled plastics into new products to designing AI tools for climate action. You could be next—by building your own sustainable digital competences.

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Amplify Environmental Impact with Digital Tools

The key point is that digital competence and tools amplify your ability to make a sustainable impact.

It allows you to create solutions that can reach more people, operate more efficiently, and adapt quickly.

Meanwhile, your commitment to sustainability ensures that the purpose of those digital solutions is aligned with protecting the planet and society.

Businesses that merge these two aspects often have a competitive edge – they innovate in tech while also meeting the growing consumer demand for responsible, eco-friendly products and services.

Section 03

Entrepreneurial Mindset – Think Like a Change-Maker

Competences Developed in Section 3

Business Skills

01 Creativity, Mobilizing Resources (e.g., using creative thinking to apply circular economy principles; leveraging renewable resources and partnerships to innovate sustainably)

Green Skills

02 Sustainability Mindset, Systems Thinking, Adaptability (e.g., ; adapting business strategies in response to ecological limits and climate realities)

Digital Skills

03 Problem-Solving with Digital Tools, Data Interpretation (e.g., using mind mapping tools to inform design decisions and optimise impact)

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What it Means to Think Like a Change-Maker

Why Green and Digital Entrepreneurship are Essential:

Entrepreneurs must navigate climate change, digital transformation, and social complexity. Adaptability, creativity, digital fluency, and sustainability thinking empower entrepreneurs to manage complexity and drive innovation

❖ **Entrepreneurial mindsets** fuel continuous innovation, with digital tools enhancing sustainable impact.

❖ **Digital skills** enable adaptation and resource efficiency (e.g., IoT in energy management)

❖ **Green thinking** opens new green market opportunities (e.g., circular products) and supports businesses that thrive within environmental boundaries.

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Think Like a Change-Maker

By now, you might be wondering:

"Okay, what specific skills and competencies do I need to become a sustainable, digitally-savvy entrepreneur?"

The next section shows you the skills you should aim for, why they are important and how to start building them.

Think of this as a checklist for your personal development. ***Each item will help you to think like a changemaker, combining digital know-how with a sustainability mindset.***

Tech Literacy & Adaptability

Practice an adaptable digital mindset!

Become comfortable with a range of digital tools and be ready to learn new ones. The tech world changes fast, so an *adaptable mindset* is gold

Stay curious in all things digital.

If it's learning a programming language, understanding how to use digital marketing analytics, or exploring emerging tech like AI – staying curious and embracing lifelong learning will keep you ahead.

Bonus!

Adaptability is not just a tech skill, it's a sustainability skill too, since sustainability challenges and solutions are also evolving rapidly.

Critical Thinking & Problem Solving

Approach problems systematically.

Don't forget about striving to improve sustainability.

Cultivate the habit of approaching problems systematically. In the digital realm, this might mean debugging code or analyzing user feedback data

In sustainability, it could mean doing a lifecycle analysis of a product to find where waste happens.

In both cases, you're figuring out how to improve a situation.

Being able to critically assess information (like spotting fake news or greenwashing claims) is also crucial – it helps you make informed ethical decisions for your business.

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Innovation & Creativity
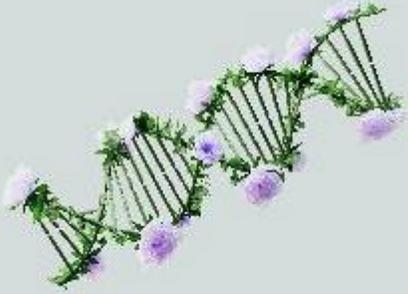
Be curious and try to be innovative in everything you do!

Have a creative and open-minded approach, especially to challenging situations.

Entrepreneurship thrives on innovation. Try to see how technology can be applied in creative ways to address environmental or social issues.

For example, *can drone technology help with reforestation? Can an online game educate users about recycling?*

A creative, open-minded approach will help you connect the dots between digital tools and sustainability goals in novel and innovative ways.

Ethical and Responsible Leadership

Commit to being ethical in everything you do!

As a future leader, commit to ethics in both tech and sustainability. This means things like respecting user privacy and data security (digital ethics) and ensuring your business practices are fair and eco-friendly (ethics in sustainability). Establishing trust through ethical behavior will strengthen your brand and personal reputation.

Practice a responsible, value-driven mindset.

Remember, being responsible is a competence – it involves values and mindset. In fact, frameworks like GreenComp include "valuing sustainability" as a key component. So, value-driven leadership is a skill to practice now.

Collaboration & Communication

Surround yourself with a good team & learn to communicate on and offline.

Work on your teamwork and communication skills, both online and offline. Many sustainability challenges (like climate change or community development) require working with diverse groups and even educating customers. Being able to collaborate using digital platforms (video calls, project management tools, social networks) is a must in modern entrepreneurship.

Be able to clearly communicate your mission confidently.

Being able to communicate your mission —tell a compelling story about how your product helps the environment — will set you apart. This includes cultural and social awareness as sustainable solutions often need local insights and empathy.

Systemic Thinking

Look at the big picture and don't lose sight of it.

It's a higher-order competence that develops with experience and education, but start training yourself to ask, *"How does this part connect with the whole?"*

Look for opportunities in digital systemic thinking.

Systemic thinking means seeing the "big picture" and understanding how different parts of a system influence one another. For sustainability, this is crucial. For example, if you create a new gadget, systemic thinking means considering all stages of its life cycle – from raw materials, to manufacturing, to how it's used and finally disposed of or recycled.

If you have a strong grasp of your business's ecosystem, you can identify more opportunities to make it sustainable. Digitally, systemic thinking helps in complex projects (like developing an app, which might involve front-end, back-end, user experience, etc., all working together).

Resilience and Grit

Don't give up if it doesn't work the first time.

Be determined, persevere and show grit.

Finally, building something new – especially something that challenges the status quo – isn't easy. Not every idea will work on the first try. Developing resilience is key. When a digital tool fails or an eco-friendly design turns out too costly, a resilient entrepreneur doesn't give up; they iterate and improve.

Perseverance is a competence in itself. Stick to your goals when challenges and setbacks appear. Stay committed to your purpose, keep learning, keep moving forward despite obstacles. When you combine determination, perseverance, and grit, you develop the resilience needed to succeed as a sustainable digital entrepreneur.

Entrepreneurship

With Practice and Time, You'll Get There!!

Take a moment to reflect on these competences. You might realise you already have some of them, or perhaps you see gaps you want to fill.

Remember, **competences are learned and practiced** over time – nobody is born knowing how to code or how to conduct a carbon footprint assessment.

The fact that you're reading this and interested in combining entrepreneurship with digital skills and sustainability is a fantastic start!

Well Done

You have Completed... Module 1

Section 1 Introduction to EntreComp, DigComp and GreenComp Entrepreneurial Frameworks
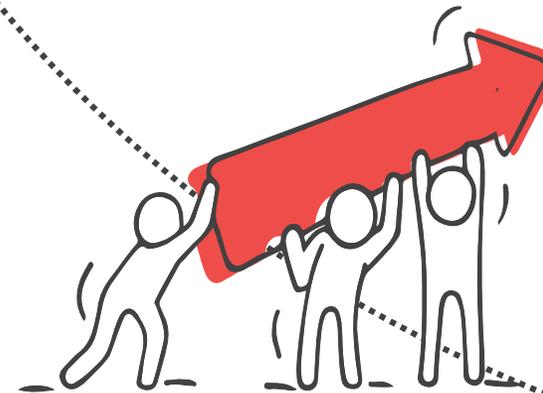
Section 2 The Power of Entrepreneurial Skills in a Green and Digital World

Section 3 Entrepreneurial Mindset – Think Like a Change-Maker

Module 2 (Part 1)

Section 1 Introduction to From Idea to Action: The Synergy and Intersection of the Three Frameworks

Section 2 Real-European Examples: Entrepreneurial Skills From Idea to Action

Next is...